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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/016,437	12/10/2001	Nader Dutta	594-25576-US	5333
28116 7590 04/16/2009 WesternGeco L.L.C. Jeffrey E. Griffin 10001 Richmond Avenue HOUSTON, TX 77042-4299				
EXAMINER				
JONES, HUGH M				
ART UNIT		PAPER NUMBER		
2128				
NOTIFICATION DATE		DELIVERY MODE		
04/16/2009		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

lgoldsmith@slb.com  
aperalta2@slb.com  
rsmith31@slb.com

**Advisory Action  
Before the Filing of an Appeal Brief**

**Application No.**

10/016,437

**Applicant(s)**

DUTTA ET AL.

**Examiner**

Hugh Jones

**Art Unit**

2128

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 02 April 2009 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☐ The period for reply expires \_\_\_\_\_ months from the mailing date of the final rejection.  
b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.  
Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because:  
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☒ Applicant's reply has overcome the following rejection(s): 112-1.  
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
The status of the claim(s) is (or will be) as follows:  
Claim(s) allowed: \_\_\_\_\_.  
Claim(s) objected to: \_\_\_\_\_.  
Claim(s) rejected: 1-8, 12-15, 17-27, 29-32.  
Claim(s) withdrawn from consideration: \_\_\_\_\_.

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:  
See Continuation Sheet.  
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_.  
13. ☐ Other: \_\_\_\_\_.

/Hugh Jones/  
Primary Examiner, Art Unit 2128

Continuation of 11. does NOT place the application in condition for allowance because:  
The arguments regarding the art rejections are not persuasive.

Page 230: The elastic earth models (consisting of P-wave velocity, density, and Poisson's ratio) obtained at each location of the prospect where prestack GAINversion was run can be used as background low-frequency impedance trends for poststack inversion and can create a hybrid inversion scheme. Two such hybrid schemes are fully described by Mallick et al. (1999) and summarized below..

Mallick then discloses (pp. 230-231):... compute P- and S-wave impedances from prestack data and use standard AVO processing to generate AVO intercept and AVO gradient volumes. Next, we assume a background P- to S-wave velocity ratio, and combine the AVO intercept and gradient volumes to generate a pseudo S-wave volume. A derivation for computing pseudo S-wave data from the AVO intercept and gradient is presented in Appendix A. Finally, we run poststack inversions on AVO intercept and pseudo S-wave volumes, using P- and S-wave impedance values from prestack inversion at discrete locations as background impedance trends. Once P- and S-wave impedances from these poststack inversions are obtained, we can compute Poisson's ratio according to Appendix B.

Note from above " Next, we assume a background P- to S-wave velocity ratio, and combine the AVO intercept and gradient volumes to generate a pseudo S-wave volume". The s wave data is derived from the P data via the assumed ratio. Thus, the section cited in the rejection is only directed to P wave data.

also note: "A derivation for computing pseudo S-wave data from the AVO intercept and gradient is presented in Appendix A".

Finally, see section "A".

The argument regarding a lack of teaching of any stratigraphic analysis is not persuasive. The whole paper is directed to stratigraphic analysis.

Applicants are thanked for the amendment.